

Claims

1. Expandable stent for insertion into a body passage having a mesh structure of interconnecting portions (6) joined together by joining portions (5),
5 **characterized in** that said stent, when inserted into said body passage, is adapted to dissolve into smaller parts, wherein the joining portions dissolves faster than the interconnecting portions.
2. Expandable stent according to claim 1, **characterized in** that the
10 and that the joining portions are made from a first material and the interconnecting portions are made from a second material different from said first material, wherein the first material dissolves faster than said second material.
- 15 3. Expandable stent according to claim 1, **characterized in** that the mesh structure makes the stent to dissolve in such a way that the longitudinal structural integrity initially is decreased.
4. Expandable stent according to claim 3, **characterized in** that the
20 longitudinal structural integrity decreases faster than the radial structural integrity decreases.
5. Expandable stent according to claim 4, **characterized in** that the radial structural integrity is related to the forces exerted by the stent towards
25 the body passage wall.
6. Expandable stent according to claim 1, **characterized in** that said smaller parts have an essentially cylindrical shape.
- 30 7. Expandable stent according to claim 1, **characterized in** that said smaller parts are essentially ring-shaped.
8. Expandable stent according to claim 1, **characterized in** that said first material is a resorbable polymer.

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9. Expandable stent according to claim 1, **characterized in** that said interconnecting portions being straight.
10. Expandable stent according to claim 1, **characterized in** that said interconnecting portions being curve-shaped.
11. Expandable stent according to claim 1, **characterized in** that said joining portions are made of metal.
12. Expandable stent according to claim 1, **characterized in** that said interconnecting portions are made of metal.
13. Expandable stent according to claim 1, **characterized in** that said joining portions and interconnecting portions are made of different metals, a first metal and a second metal, respectively.
14. Expandable stent (3; 7) according to claim 13, **characterized in** that said first and second metals have different electrochemical potentials, thereby forming a galvanic element that drives an electrochemical process in which the first metal is consumed inside said body passage.
15. Expandable stent (3; 7) according to claim 14, **characterized in** that the first metal is consumed in said electrochemical process after a pre-defined time inside said body passage.
16. Expandable stent (3; 7) according to claim 14, **characterized in** that the second metal dissolves by corrosion inside said body passage.
17. Expandable stent (3; 7) according to claim 14, **characterized in** that the second metal dissolves by corrosion after a pre-defined time inside said body passage.
18. Expandable stent (7) according to claim 13, **characterized in** that the second metal is provided as a thin layer on the first metal.

19. Expandable stent (7) according to claim 13, **characterized in** that the second metal is provided as a thin layer on selected parts of the first metal.
20. Expandable stent according to claim 13, **characterized in** that the second metal is provided as granules or cells within the first metal.
21. Expandable stent according to claim 13, **characterized in** that the first metal and the second metal are in the form of an alloy or a compound.
22. Expandable stent according to any of claims, **characterized in** that the stent comprises more than two metals, all of which have different electrochemical potentials, thereby forming galvanic elements that each drives a respective electrochemical process in which the metal having the lower electrochemical potential is consumed.
23. Expandable stent according to claim 1, **characterized in** that the joining portions and the interconnecting portions are made from the same material.
24. Expandable stent according to claim 23, **characterized in** that said material is a metal.
25. Expandable stent according to claim 24, **characterized in** that said metal dissolves by corrosion inside said body passage.
26. Expandable stent according to any of claims 23-25, **characterized in** that the joining portions dissolve faster than the interconnecting portions.
27. Expandable stent according to claim 26, **characterized in** that the joining portions have a higher porosity compared to the interconnecting portions.
28. Expandable stent according to claim 26, **characterized in** that joining portions have a smaller radial thickness as compared to the radial thickness of the interconnecting portions.

29. Expandable stent (1; 3; 7) according to claim 24, **characterized in** that said metal dissolves by corrosion after a pre-defined time inside said body passage.

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30. Method for the manufacturing of an expandable metal stent according to claim 1 that comprises a first metal and a second metal, the second metal having an electrochemical potential that differs from the electrochemical potential of the first metal, **characterized in** that the metal stent (7) is made from a tube of the first metal, the outer surface and/or the inner surface of the tube being coated with a layer of the second metal.

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31. Method according to claim 30, further **characterized in** that the tube, which is made of the first metal, is coated with layers of several metals, all of which have different electrochemical potentials.

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32. Method according to claims 30 or 31, **characterized in** that said manufacturing involves laser cutting or etching.